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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	**Confirmation No. 8459**
Morten SYSLAK et al.	:	Attorney Docket No. 2005_1455A
Serial No. 10/549,673	:	Group Art Unit 1793
Filed December 1, 2005	:	Examiner Mark L. Shevin
A METHOD FOR PRODUCING ALUMINUM ALLOY SHEET MATERIAL AND AN ALUMINUM ALLOY SHEET	:	**Mail Stop: AF**

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY DEFICIENCY IN THE FEE FOR THIS PAPER TO DEPOSIT ACCOUNT NO. 23-0975.

RESPONSE AFTER FINAL REJECTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE UNDER 37.CFR.116
EXPEDITED PROCEDURE
EXAMINING GROUP 1700

Sir:

Responsive to the Office Action of January 13, 2009, Applicants submit the following remarks in support of the patentability of the presently claimed invention over the disclosures of the references relied upon by the Examiner in rejecting the claims. Further and favorable reconsideration is respectfully requested in view of these remarks.

Thus, the rejection of claims 1-2, 6 and 20 under 35 U.S.C. §103(a) as being unpatentable over US 6,238,497 (US '497) in view of US 6,261,706 (Fukuda) is respectfully traversed.

The Examiner has still not disputed the fact that the feature of claim 1 relating to the "material microstructure exhibiting primary particles having average size below 1 micrometer^2" is new, as none of the cited references define a method of producing aluminium alloy sheet material with such microstructure.

Thus, the Examiner states that US '497 specifically links the average cooling rate with the size of intermetallic particles produced, but does not teach what constitutes large particles. The Examiner then refers to the Fukuda reference as disclosing that the line for "large" particles is drawn at 1 micron^2 of circle equivalent diameter, and takes the position that it would have been obvious to combine US '497 with Fukuda and continuous Al strip such that the intermetallic particles have an average size "below above 1 micrometer^2", because both references recognized the relationship between the casting rate and formation of intermetallic particles when continuously casting Al strip stock for heat exchanger components.

However, although US '497 teaches that iron in the aluminum alloy forms inter-metallic particles during casting that contribute to particle strengthening, as Applicants have previously stated this reference does not at all disclose or even suggest the importance of "a predetermined solidification rate ensuring material microstructure exhibiting primary particles having average size below 1 micrometer^2" as defined in claim 1 of the present application, and which is of utmost importance to avoid an increase in pitting corrosion in the vicinity of the Fe-bearing particles, which is detrimental to the corrosion performance of the alloy.

The US '497 reference is concerned with a totally different problem/solution than the present invention, namely that if the average cooling rate is less than 10° C/sec, the intermediate particles formed during casting **will be too large and cause rolling problems**. The US '497 reference does not at all disclose or suggest that there would be a problem with increased pitting corrosion if the size of the Fe-bearing particles of the cathodic area in the alloy was increased.

Fukuda teaches an aluminium alloy clad material as tube material or header material for heat exchangers that exhibits superior strength after brazing and excellent corrosion resistance, and where a sacrificial anode material may be clad onto an aluminium strip possessing a prescribed number of large Si and Fe intermetallic particles which are present to preferentially corrode and thereby protect the inner layer through galvanic protection. This represents a totally different solution to prevent corrosion than the present invention, and suggesting a combination of US '497 and Fukuda is, in Applicants' opinion, based on hindsight reasoning, which is strictly prohibited in judging the patentability of a claimed invention. The fact that Fukuda teaches the

use of a sacrificial clad to control corrosion, instead of material microstructure exhibiting primary particles having average size below 1 micrometer^2 as in the present invention, proves the fact that the present invention as defined in the claims is not obvious in view of the prior art, neither Fukuda nor US '497 nor a combination thereof.

As previously stated, the present invention is concerned with a totally different problem and solution, namely to produce an aluminium alloy sheet material at a predetermined solidification rate to ensure material microstructure exhibiting primary particles having average size below 1 micrometer^2 to avoid an increase in pitting corrosion in the vicinity of the Fe-bearing particles. Thus, with the present invention the aim is to produce an alloy with small particles and which as such is corrosion resistant, whereas Fukuda is concerned with an aluminium alloy with large particles designed to corrode and to be clad to another aluminium alloy. US '497 does not deal with corrosion at all, but rather with large particles causing rolling problems, and combining these two references in the manner suggested by the Examiner would not occur, and in fact would be meaningless, to one of ordinary skill in the art.

The Examiner argues on page 10 of the Official Action that both US '497 and Fukuda recognize the relationship between the casting rate and formation of intermetallic particles when continuously casting Al strip stock for heat exchanger components. The fact is however that neither one of these two references suggests the possibility of controlling the particle size to prevent corrosion as in the present invention.

For these reasons, Applicants take the position that the rejection based on US '497 in view of Fukuda should be withdrawn.

The other prior art rejections, as set forth in items 4-6 of the Office Action are also respectfully traversed.

The comments set forth above concerning the US '497 and Fukuda references are equally applicable to all of these rejections, which are applied only against dependent claims in the present application. Since claim 1, the only independent claim under consideration, is patentable over US '497 and Fukuda for the reasons given above, it is Applicants' position that the rejections in items 4-6 should also be withdrawn. Applicants particularly note that none of these

other secondary references is concerned with the control of particle size, to which the present invention is directed.

Therefore, in view of the foregoing remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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